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St. Paul District

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Public Affairs

Corps Facts

Mississippi Headwaters

Reservoir Operating Plan Evaluation

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The Mississippi River headwaters are located in north central Minnesota. In this area, the U.S. Army Corps of Engineers operates six dams with the U.S. Forest Service operating one dam. Most were constructed in the early twentieth century for the purpose of aiding navigation by stabilizing water flow in the Mississippi River between St. Paul, Minn., and Prairie du Chien, Wis. Following the construction of the locks and dams downriver during the 1920s and 1930s, however, the Headwaters' dams were no longer needed to supplement flows and were operated in ways benefiting upstream interests.

It has been more than 40 years since the operations plans for the Headwaters' dams were last evaluated. The public demands and desires for water resources in this region have greatly changed. Therefore, the Corps and the Forest Service agreed to work together in 2001 to find a better way to manage this nationally significant resource for improved public use and tribal trust purposes.

What came out of this agreement is the development of a Reservoir Operating Plan Evaluation, or ROPE, study. The ultimate purpose of this study is to define and fully coordinate a system wide plan of reservoir operations that will allow diverse public and tribal uses to continue to take place and to do this in such a manner as to balance socio-economic and environmental operational concerns. When evaluating operations alternatives, the Corps and Forest Service are considering the many different needs and desires for this area. The ultimate purpose of this study is to develop a plan of operations, either new or existing, which will allow the Headwaters to remain a pristine public resource in the future, while supporting the many diverse uses which taking place in the region each year.

Study Description

The study will primarily focus on a number of key areas including: flood damage reduction, fish and wildlife habitat restoration and preservation, recreation and tourism, water quality and water supply, erosion and sedimentation, hydropower and sustaining hydrologic function on the lakes and rivers. Possible outcomes of the study could be lake level changes, winter drawdown changes, a more natural flow release for downstream river reaches, increased minimum reservoir release rules and, in some areas and reservoirs, changes in flood control operating levels.

To better analyse the system as a whole, the study is using two primary models – the Prescriptive Reservoir Model and the Structural Thinking Experimental Learning Laboratory with Animation model – to help evaluate and formulate alternative operating plans.

Project Status

The Corps of Engineers and the Forest Service began the study in December 2001 and are expected to complete it in the summer of 2007. The combined Corps of Engineers and Forest Service study cost is expected to be about \$4.2 million. The models are running and a preliminary set of operating plans has been developed. A round of public meetings to present the preliminary draft proposed plan was held at the end of August 2006. The draft report and Environmental Impact Statement are scheduled for release in late winter of 2007.